

**[This script was written by Maureen Wilks and read on KUNM during the 2016 Earth Science Week.]**

Welcome to Earth Matters: field notes on the geology of New Mexico's Enchanting Landscapes. Celebrating Earth Science week, I'm Kelsey McNamara.

In the Four Corners area – where Utah, Arizona, Colorado and New Mexico meet travelers can see more than 100 dark, jagged, seemingly out-of- place landforms jutting up from the flats.

These volcanic plugs, or necks, are the hardened remains of molten rock that once plugged the throats of ancient volcanoes. The Southwest's most famous volcanic neck, Shiprock, rises 1,800 from the plains of northwestern New Mexico like a ship above the ocean. In Navajo legend, Shiprock is known as the rock with wings, a great bird that brought people to this land from the north. Travelers can also see three prominent walls or wings of volcanic rocks, called dikes, marching out across the grasslands from Shiprock. The dark-grey to greenish-grey dikes are composed of minette, an alkali-rich, low-silica igneous rock. The longest dike extends for almost 6 miles. When the volcano was active, the force of the explosive eruptions fractured the surrounding bedrock; and these radiating fractures filled with molten lava. Their exposed remains cut vertically through horizontal layers of rock, like a knife stuck in a layer cake. Because the volcanic rock is harder than the soft shale that once encased it, they have remained standing long after the sediments have been worn away.

Celebrating Earth Science Week, I am Kelsey McNamara from the New Mexico Bureau of Geology at New Mexico Tech.